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EXAMINER
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FLETCHER, JAMES A

ART UNIT	PAPER NUMBER
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2621

DATE MAILED: 09/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/419,164	<b>Applicant(s)</b> KORI ET AL.	
	<b>Examiner</b> James A. Fletcher	<b>Art Unit</b> 2621	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 September 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12,14-30,32-48 and 50-57 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12,14-30,32-48 and 50-57 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments filed 5 September 2006 have been fully considered but they are not persuasive.

The Examiner notes that his recommendation in the final rejection mailed 23 March 2006 were only partially followed by deleting the words "or prohibited" from claims 1, 19, 32, 37, and 52. The remaining recitation of "indicating that the copying of said input signal is limited" does not significantly change the scope of the claim, since a prohibition is clearly a limitation, albeit a severe one. The Examiner recommended elimination of the alternative embodiments "by appropriate wording," which would have required a recitation of a negative limitation such as "but not prohibited."

The existing state of the claims recite examining a converted signal for information added to the signal (although by what means and at what point is not made clear in the claims), which limits the copying of that signal. Applicant's Representative argues that this means the signal may be copied a predetermined number of times. The Examiner respectfully notes that this is not recited in the claims, and that a limitation on copying can include several other limitations including a time limitation for copying, a quality limitation on copying, and a medium limitation on copying. The Examiner further notes that the Applicant's Representatives argument allows for a predetermined number of copies, and that if that number of copies has already been made, the limitation on the number of copies reaches zero, which is tantamount to a prohibition.

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Since the Examiner did not enter the latest amendment after final, this rejection, although based on the same references as the previous final, is non-final.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 4, 9, 15-16, 19, 22, 27, 33-34, 37, 40, 45, 51-52, and 55-57 are rejected under 35 U.S.C. 102(b) as being anticipated by Nishigaki et al (5,825,968).

**Regarding claims 1 and 19**, Nishigaki et al disclose a signal conversion apparatus and method comprising:

- signal conversion means and method for converting an input signal to the apparatus to a converted signal (Col 3, lines 62-66);
- determination means and method for examining the input signal for additional information indicating that copying of the input signal is limited (Col 2, lines 8-9);
- prohibiting means for prohibiting the converted signal from being copied when the additional information is present on the input signal (Col 2, lines 16-19);  
and
- notification means for notifying a user of the apparatus of the prohibiting of the converted signal (Col 2, lines 16-21).

**Regarding claim 37**, Nishigaki et al disclose a signal conversion apparatus comprising:

- a signal converter adapted to convert an input signal to the apparatus into a converted signal (Col 3, lines 62-66);
- a signal detector adapted to examine the input signal to detect additional information added to the input signal and determine whether the additional information indicates that copying of the input signal is limited (Col 2, lines 8-9);
- a switch for prohibiting the copying of the converted signal when the additional information indicates that copying of the input signal is limited (Col 2, lines 16-19); and
- a visual indicator adapted to notify a user of the apparatus of the prohibiting of the converted signal (Col 2, lines 16-21).

**Regarding claims 4, 22 and 40**, Nishigaki et al disclose a signal conversion apparatus and method wherein the input signal is a video signal (Col 3, lines 62-66) and the signal conversion means is adapted to convert a signal format of the video signal (Col 3, line 66 – Col 4, line 2).

**Regarding claims 9, 27, and 45**, Nishigaki et al disclose a signal conversion apparatus and method wherein the input signal is an audio signal (Col 4, lines 8-13).

**Regarding claims 15, 33, and 51**, Nishigaki et al disclose a signal conversion apparatus and method for enforcing copy protection on converted signals, wherein the input signal is a digital signal (Col 3, lines 14-16).

**Regarding claims 16, 34, and 52**, Nishigaki et al disclose a signal conversion apparatus and method wherein the additional information comprises a plurality of different types of information (Col 3, lines 28-42), and when the determination means determines that any one of the plurality of different types of information indicates that copying of the input signal is limited, the prohibiting means disables the converted signal (Col 4, lines 61-63).

**Regarding claims 55-57**, Nishigaki et al disclose a signal conversion apparatus and method wherein the prohibiting means prohibits the converted signal from being transmitted as an output signal from the signal conversion apparatus (Col 3, lines 62-66).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 10-11, 28-29, and 46-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishigaki et al as applied to claims above.

**Regarding claims 10, 28, and 46**, Nishigaki et al are silent on converting the sampling frequency of an audio signal.

The examiner takes official notice that the sampling frequency of an input signal is notoriously well known to be a design choice, and may be modified to suit the needs of the product or its application.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to enforce copy protection when converting the sampling frequency of the incoming audio signal.

**Regarding claims 11, 29, and 47,** the combination is silent on converting a compression method.

The examiner takes official notice that data compression conversions are notoriously well-known and commercially available techniques for modifying compressed data to solve a variety of problems, including bandwidth and storage limitations.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to enforce copy protection when converting from one method of compression to another.

6. Claims 7, 12, 25, 30, 43, and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishigaki et al as applied to claims above, and further in view of Kori et al (5,778,064).

**Regarding claims 7, 25, and 43,** Nishigaki et al disclose a signal conversion apparatus and method as described above, including the ability to handle both analog and digital video signals, but does not specifically disclose conversion of a video signal from analog into digital.

Kori et al teach a signal conversion apparatus and method wherein the video signal is an analog video signal and the signal conversion means is adapted to convert the analog video signal into a digital video signal (Col 8, lines 10-123 "the video HD

signal...A/D converter 54 which converts the analog HD video signal to a digital HD video signal”).

As taught by Kori et al, conversion of a video signal from digital to analog is well-known, widely used, and commercially available, and provides a user with the ability to carry out complex algorithms, storage on digital media, and other useful functions.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Nishigaki et al to provide for an analog input and analog to digital conversion.

**Regarding claims 12, 30, and 48,** Nishigaki et al disclose a signal conversion apparatus and method as described above, including the ability to handle both analog and digital audio signals, but do not specifically disclose conversion of an audio signal from analog into digital.

Kori et al teach a signal conversion apparatus and method wherein the audio signal is an analog audio signal and the signal conversion means is adapted to convert the analog audio signal into a digital audio signal (Col 8, lines 1-2 “A/D converter 52 which converts the analog audio HD signal to digital audio HD signal”).

As taught by Kori et al, conversion of an audio signal from digital to analog is well-known, widely used, and commercially available, and provides a user with the ability to carry out complex algorithms, storage on digital media, and other useful functions.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Nishigaki et al to provide for an analog input and analog to digital conversion.

7. Claims 2-3, 5-6, 20-21, 23-24, 38-39, and 41-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishigaki et al as applied to claims above, and further in view of Iwaki (6,567,097).

**Regarding claims 2-3, 20-21, and 38-39,** Nishigaki et al disclose a signal conversion apparatus and method wherein the input signal is a video signal (Col 3, lines 14-16) and the signal conversion means is adapted to perform a signal conversion process on the video signal (Col 3, line 66 – Col 4, line 2), but does not include the group consisting of converting progressive scanning into interlaced scanning and converting interlaced scanning into progressive scanning.

Iwaki teaches a device including copy protection circuitry (Col 7, lines 34-48) that also includes a conversion from interlaced to progressive scan (Fig. 12A).

As taught by Iwaki, conversion from interlaced to non-interlaced (progressive) scanning, in conjunction with copy protection, allows the user to view the image signal on a high quality display while remaining sensitive to the author's intellectual property rights.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Nishigaki et al in order to include a conversion from interlaced to non-interlaced scan.

**Regarding claims 5-6, 23-24, and 41-42,** Nishigaki et al disclose a signal conversion apparatus and method as described above, but does not specifically disclose a signal format conversion selected from the group consisting of converting a high-definition television signal into a standard television signal and converting a standard television signal into a high definition television signal.

Iwaki teaches a device including copy protection circuitry that also includes a conversion from high definition into standard definition (Fig 14).

As taught by Iwaki, conversion from high definition to standard definition allows a user to view sub-picture data on a standard television screen, while remaining sensitive to the author's intellectual property rights.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Nishigaki et al in order to include a conversion from high to standard definition television signals.

8. Claims 8, 18, 26, 36, 44, and 54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishigaki et al as applied to claims above, and further in view of Nguyen et al (6,272,383).

**Regarding claims 8, 26, and 44,** Nishigaki et al disclose a signal conversion apparatus and method for enforcing copy protection on converted signals wherein the signal converter is adapted to receive digital signals, as described above, which are known by those of skill in the art to be routinely compressed, and must therefore be decompressed for display, but do not specifically disclose the conversion of a data compression method of the video signal.

Nguyen et al teach a signal conversion apparatus and method for enforcing copy protection on converted signals when the conversion is a change in compression method (Col 5, lines 62-64).

Changing compression methods is well known to those of skill in the art to allow the user to display the data on a screen or through speakers as originally intended by the author, and also allows a user to optimize compression for a channel of transmission.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Nishigaki et al in order to provide for a change in compression methods of the video signal.

**Regarding claims 18, 36, and 54,** Nishigaki et al disclose a signal conversion apparatus and method for enforcing copy protection on converted signals, wherein the input signal is a digital signals as described above, but do not specifically disclose that the signals are encrypted.

Nguyen et al teach a signal conversion apparatus and method for enforcing copy protection on a digital signal that is encrypted (Col 3, lines 1-3).

Encryption of a digital signal is a well known, widely used, and commercially available means of protecting digital data, providing the author and user with a secure and reliable means of transferring such data while greatly reducing the likelihood of theft or misuse of that data.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Nishigaki et al to include processing of encrypted digital data.

9. Claims 14, 17, 32, 35, 50, and 53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishigaki et al as applied to claims above, and further in view of Ryan et al (6,374,036).

**Regarding claims 14, 17, 32, 35, 50, and 53**, Nishigaki et al disclose a signal conversion apparatus and method wherein additional information is provided to indicate that copying of the input signal is prohibited or limited as discussed above, but does not specifically disclose the use of watermarks as a carrier of such additional information.

Ryan et al teach the use of watermarks to determine copy prohibition or copy limitation (Col 1, lines 15-18 "The present invention relates to copy protection of video material by embedding robust identification codes [e.g., watermarks or fingerprints] in video signals, and use of these identification codes for a 'copy-once' method and apparatus").

As taught by Ryan, watermarks are a well-known and available technique of providing copy protection to image data signals. In a system where the data conversion detected copy protection in the form of a watermark, common sense would dictate that the copy protection data would be detected and heeded by the storage and/or display equipment.

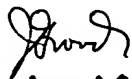
Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to enforce copy protection dictated by a watermark.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James A. Fletcher whose telephone number is (571) 272-7377. The examiner can normally be reached on 7:45-5:45 M-Th, first Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Groody can be reached on (571) 272-7950. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JAF  
13 September 2006

  
**James J. Groody**  
**Supervisory Patent Examiner**  
**Art Unit 262** 2621